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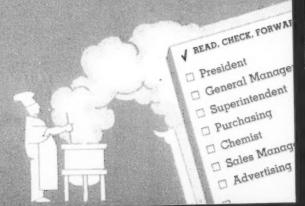
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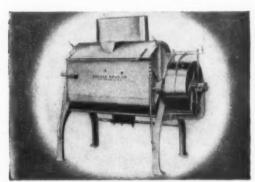


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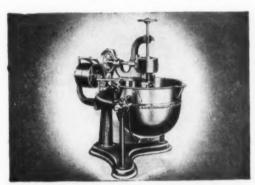
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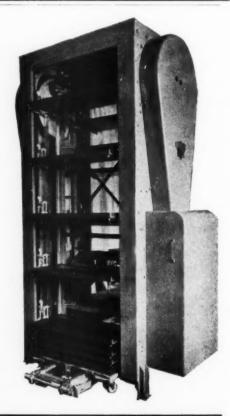
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The Publisher's Page.....

o greater compensation can come to a publisher and editor than the words "Those were excellent articles in your last issue." Our February issue was one which called forth such comment from coast to coast, by letter and by telephone. Although one evening's reading time per month is about the maximum it takes to read a single issue of The Manufacturing Confectioner, yet individual articles are often the result of months, even years, of research by the authors, alone or with the help of others. Take this February issue which has caused such comment:

In July 1941 we first learned of the particular work being done by Walter Baker & Company on cooling tunnels. Yet it has taken 18 months to get this material released for publication. Similarly, W. H. Childs became interested in candy scrap recovery, particularly the reclamation of the sugar in scrap candy, several years ago when he was with a sugar firm. He began his experiments at that time, but it was only recently that we persuaded him to record his experiments, and the facts produced by them, for the benefit of the whole candy industry. The series has been "in work" for over six months, so far as our editor is concerned.

K. E. Langwill, who is well known to our industry, has finally consented, after months of persuasion on our part, to take over the work on our Technical Literature Digest. Miss Langwill is particularly well suited, by education and experience, to conduct this important department. She is at present with the Nutrition Foundation in New York City, and is in constant touch with research being carried on in raw materials. Linking her experience in the confectionery industry to the research work she is doing on Nutrition, makes an ideal combination.

Our Candy Clinic shoppers have been buying candy for us since the beginning of the Clinic service 16 years ago. Our clinic superintendent has directed this work from the very start and has analized candies from all parts of the world. He is one of the ablest of production men in this industry, is on the candy firing line daily, and has contributed inestimably to the raising of quality standards of candy. The whole purpose of the Clinic is to be helpful to the manufacturers. Our readers appreciate this.

When I was told by the president of one of the highly successful plants in the medium-size class that every month our magazine was routed through the plant and after the production men had read it, they held a round table discussion to see if they could use any of the suggestions in making theirs a better plant, I felt more than ever the responsibility of publishing a technical magazine for a growing industry such as ours. Because we know The Manufacturing Confectioner is taken seriously by candy manufacturers, we feel greatly responsible for the editorial material and try to provide the best that is available. Your cooperation and suggestions will go a long way toward making this magazine even more interesting and important to the entire industry. Sources for our editorial program are your letters, our visits at your plants, your visits at our offices, and constant reading and checking with work in allied or related industries. Every day brings new suggestions. Our search for a competent author to handle a particular assignment may extend over months, and years, but it is nevertheless on our schedule, and some day, somewhere, we find our answer.

This global war will change many industries, and ours among them. Many, many peoples all over the world for the first time are learning to enjoy candies made in America. Other countries are going to make more sweets; they are even now searching for types of candies they can make in their own particular climates. Our subscribers all over the world will be making the candies that will satisfy this "craving for sweets" that is universal.

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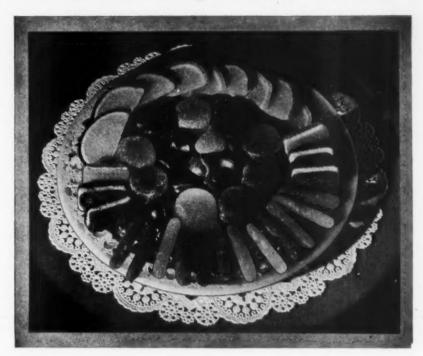
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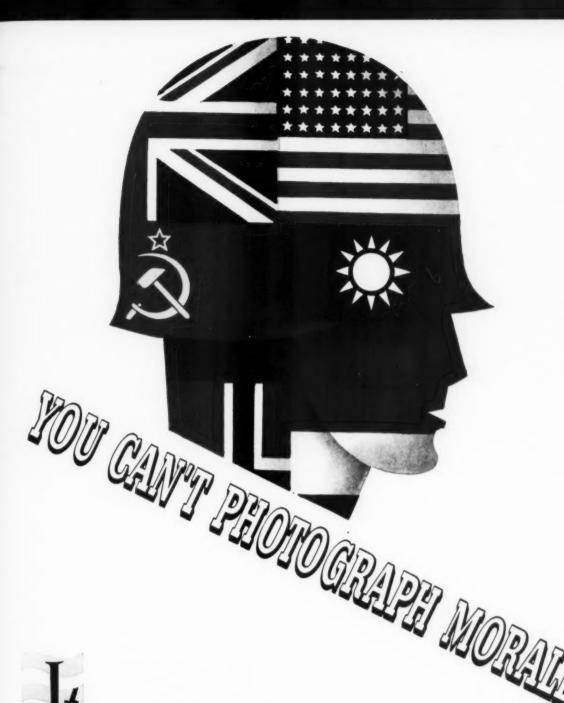
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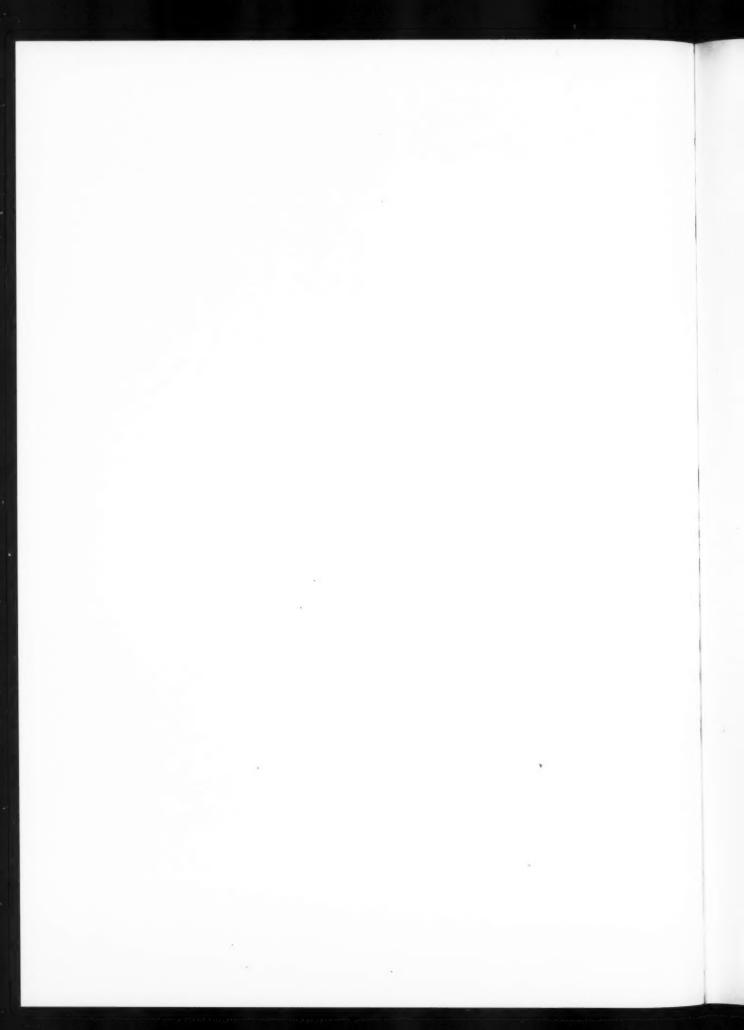


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Principles and Design Of Chocolate Cooling Tunnels

by EDWARD W. MEEKER

Research Department Walter Baker & Co., Inc. In Part II, the author discusses the physical specifications of cooling tunnels in terms of research data on the chemical properties of chocolate

The Research Laboratories of Walter Baker & Co., and General Foods, Inc., have evolved simple, practical methods for quantitatively evaluating the total per cent crystallization of the cocoa butter present at any stage of chocolate manufacture or use. Recently these Laboratories have demonstrated a direct quantitative measure (in one determination) of both the apparent per cent crystallization and the stability of that crystallization at any stage in processing. Measurements, made on all types of chocolate products under both experimental conditions, have resulted in a quantitative interpretation of the fundamental processes occurring when chocolate products are cooled, crystallized and solidified.

In order to clarify the procedure of chocolate tempering (cooling) and solidification, it has been assumed that these operations take place in three principal stages. The following general information is taken from the work presented in a confidential report of E. Seltzer and D. G. Mitchell on "Calorimetric Studies of Cocoa Butter Crystallization in Cacao Products" on file at the Research Department of Walter Baker & Co. This work corroborates and expands in a quantitative manner that done by M. Pichard in 1931 and 1932 ("Off. Internat. de Fabric du Cacoa et du Chocolat") on the tempering of chocolate, and R. Whymper, in his book, "The Problem of Chocolate Fat Bloom".

The three principal stages are as follows:

1. The tempering (cooling) or pre-depositing stage (introduction of "seed" crystals)

The solidification stage (depositing or enrobing and final solidification in the cooling tunnel).

3. The storage or holding stage

STAGE 1—This primary stage is concerned with initiating the cocoa butter "seed" or nucleus by proper cooling. In general, the procedure is as follows: The thoroughly melted chocolate is agitated while slowly cooling to the point where incipient crystallization ('seeding') raises the viscosity appreciably and solidification is imminent. The success of obtaining stability at this stage depends upon initiating crystallization (seed) under equilibrium conditions. By this we mean "the removal of heat at a rate and temperature difference

such that little or no crystallization or congelation into unstable states or solid solutions can occur." There should be a regulated crystallization of the higher melting fat fractions from the liquid fat so that a subsequent orderly deposition of the lower melting fractions can occur with facility in the next stage (Stage 2).

Since cocoa butter or chocolate can, by too rapid cooling, solidify (supercool) at temperatures below its melting point, the greater the degree of supercooling the further below the melting point will be the temperature of solidification. Applying this more definitely to the case of excessive supercooling, we have the fact that a too rapid cooling at a non-equilibrium rate such that the latent heat is not removed will result eventually in a spontaneous solidification where the higher melting fractions are trapped in solid solution or exist in unstable modifications. Upon re-arrangement from the unstable to stable state, a heat release will manifest itself in proportion to the degree of supercooling. This will result in unsatisfactory, "grainy", soft or bloomed goods. Curves typical of such phenomona are quite familiar (see Jensen's "Chocolate, Confectionery and Cocoa"—page 173; and Whymper's "The Problem of Chocolate Fat Bloom" -page 47; also curves on file at the Walter Baker Laboratory prepared in 1936 by Seltzer and Meeker during studies on supercooling of cocoa butter). Consequently this supercooled condition must be avoided if satisfactory results are to be expected.

Most of the cooling in this pre-depositing stage results in removal of sensible heat. While yet in the fluid stage, little crystallization occurs and consequently, very little latent heat is removed. This fact is novel and provocative in view of the former misconception that a fairly considerable portion of the latent heat was removed from the fluid or semi-plastic cocoa butter or chocolate. These studies we believe are the first to reveal quantitatively that such is not at all the case. Our heat measurements definitely show that the order of per cent crystallization is only from 0 to 3% at this stage. It is important to recognize this fact because otherwise much effort and time may be expended in the pre-depositing (tempering) stage in the delusion that the thickening (viscosity rise) is due to advanced crystallization and latent heat removal.

carried out to establish the fact that the rise in viscosity (thickening) is accompanied by only a small amount of crystallization. Dr. A. C. Shuman has postulated that "the viscosity of fluid chocolate in the pre-depositing stage has been found to be a function of the number of cocoa butter crystals larger than a certain size present. The viscosity of a liquid chocolate cooled to a temperature under certain conditions at which the cocoa butter will crystallize apparently remains constant for a period of time until the cocoa butter crystals reach a certain size and then the viscosity begins to rise rapidly. In chocolate samples this rise in viscosity occurs a short time before the crystals become large enough to be visible under a microscope, but in pure cocoa butter the crystals are visible before the viscosity rise and a large number must be formed before the viscosity begins to This critical size is a function of the type of chocolate (sweetened, unsweetened, etc.) and of the initial viscosity of the sample in the completely liquid state.'

The process of tempering (cooling) and solidification seems to be one of slow crystallization from a liquid, the composition of which is constantly changing as crystallization proceeds. The composition and melting point of the final liquid to crystallize will be dependent upon the rate at which the temperature is lowered.

To summarize we have:

1. In the pre-depositing or tempering stage of cocoa butter or chocolate, crystallization rarely exceeds 3 per cent.

2. The pre-depositing or tempering stage removes little more than sensible heat.

- 3. By tempering (cooling) under equilibrum conditions and avoiding supercooling, the seed or nucleus is established for the spontaneous growth of stable crystals with the exclusion or minimum of unstable modifications.
- The rise in viscosity (thickening) is a function of the specific size of the cocoa butter crystals when formed.

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STAGE 2—This is the stage with which this manuscript is particularly concerned. Crystallization proceeds at its maximum rate, and solidification is completed. During this stage of the process most of the latent heat of crystallization is evolved, and this heat must be properly and efficiently removed in order to obtain a stable crystalline structure, good gloss, and satisfactory shelf life stability. It is very important upon depositing or enrobing the properly tempered (cooled) chocolate, in which a highly sensitive condition of incipient crystallization (seed) is present, to avoid any tendency toward

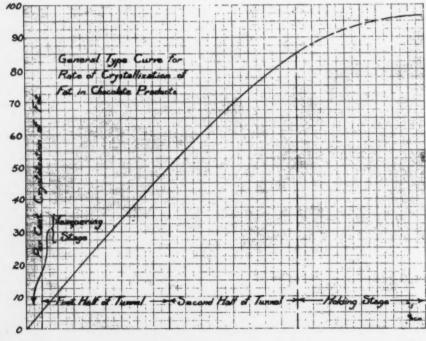
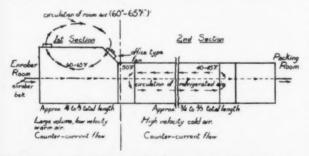


Chart showing rate of crystallization of fat in chocolate at stages of the cooling process.

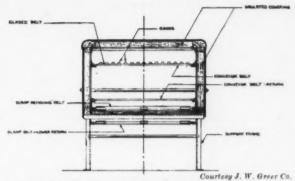
a too rapid solidification of the mass (supercooling). If supercooling is present, it forms an unstable crystalline state or congelation which results in the following phenomena: (1) the chocolate mass is usually "case hardened" (analogous to case hardening of iron and steel) and forms a hard dense shell around the remaining semi-plastic chocolate which seriously delays the subsequent removal of the latent heat of crystallization of the remaining fractions: (2) unstable modifications are formed which only revert or transform slowly to the stable state, as pointed out previously. These unstable modifications no doubt result in a release of heat when they transform to the stable state. These two factors then tend to destroy or modify any stable state that was originally present and cause the chocolate mass either to "de-temper" or "bloom" or both. This final solidification (crystallization) must be carried out under equilibrium conditions. To repeat, we mean "the removal of (latent) heat at such a rate and temperature difference that little or no congelation or crystallization into the unstable state can occur." There should be an orderly crystallization of the remaining lower melting fractions upon the already present crystallized higher melting fractions (seed).

We have investigated the designs of many cooling tunnels used for chocolate and confectionery work. Through these investigations it has been shown that quite often the usual cooling tunnel is constructed and operated almost in direct contradiction to the fundamental principles of proper "tempering" and crystallization. The basic concept for cooling tunnel design, as presented here, is derived from a series of practical, comprehensive cooling tunnel studies made by Seltzer & Mitchell, and Meeker & Mitchell on file in the Walter Baker Laboratory. This concept is as follows: If we assume that the enrobed or deposited chocolate has been properly "tempered" (cooled) and that a stable state of incipient crystallization (seed) is present then (1) the enrobed or deposited chocolate should first be cooled at a relatively warm temperature until the mass has crystallized into an almost solid, congealed state forming a dense matrix or network of stable crystalline fat upon which a subsequent orderly deposition of the remaining liquid fat can be accomplished; (2) completion of the crystallization (up to 90%) with efficient removal of the latent heat of crystallization at a relatively cold temperature (final crystallization is completed by storage in a properly cooled room-see stage 3).

We have available quantitative data that shows that the *rate* of crystallization of the cocoa butter in chocolate products follows the basic concept presented above to a remarkable degree; viz., on depositing or enrobing, the per cent crystallization is of the order of 0-3%; at approximately one-half way through the cooling tunnel the per cent crystallization is in the order of 50%; at



Design of chocolate cooling tunnel based on principles developed by the research reported in Mr. Meeker's article.



Sectional view of cooling tunnel. Limits of all machinery in fractions are \pm .010" except as otherwise noted.

the discharge end of the cooling tunnel the per cent crystallization is approximately 80-90%; and the final crystallization (90-100%) takes place in the storage rooms, usually over quite an extended period of time. This can best be represented by a curve. Note that the crystallization is extremely rapid at first, then slopes very slowly until it is completed.

Applying these data to engineering design, a cooling tunnel system has been evolved that efficiently accomplishes the fundamental processes presented in (1) and (2) of the paragraph preceding the above. Essentially our design is in itself simple and is as follows: The cooling tunnel is divided, by a suitable baffle plate, into two distinct sections. The first section (approximately one-quarter to one-third the total length of the cooling tunnel and approximately twice the height of the remaining section) is cooled to a relatively warm temperature (specifically 60-65°F) with a large volume of slowly moving, counter-current flow of air directed so that efficient heat transfer results. This section forms the dense, almost solid matrix or skeleton of stable crystalline fat upon which a subsequent orderly deposition or crystallization of the remaining liquid fat is accomplished. It also totally insures against the possibility of supercooling" or sudden chilling of the enrobed or deposited chocolate.

The second section of the tunnel (the remaining threequarters or two-thirds respectively of the total tunnel length) is cooled by a high velocity counter-current cold air stream (specifically 40-50°F.) directed so that maximum heat transfer results. This accomplishes the orderly deposition or crystallization of the remaining liquid fat into a hard, dense crystalline mass and removes the resultant latent heat of crystallization evolved. The basic construction is clearly shown on the accompanying schematic diagram. It is important to note that proper turbulence and contact of the cooling air with the enrobed or deposited goods in both sections is imperative for efficient heat transfer in removing the latent heat of crystallization. The total length of the tunnel will depend upon many conditions such as rate of production, types of goods, per cent coverage of chocolate or thickness of mold, etc. Since the rate of crystallization is definitely a function of time and temperature, the more slowly this crystallization and solidification progresses under equilibrium conditions, within limits, the better the stability. Therefore, a long tunnel is superior to a short tunnel for this particular reason. A minimum tunnel length might be considered to be 60 feet for the most efficient operation.

We are of the opinion that for efficient operation the bottom of the conveyor belt (in the case of confectionery cooling tunnels) should be actively cooled by cool air in order to promote stable and satisfactory bottoms on the enrobed centers. Unless this is done, proper crystallization of the bottoms may be delayed, and the belt may become coated with an undesirable film of cocoa butter.

We have conducted a great many practical and experimental tests using this cooling tunnel design and have definitely proven its soundness and practicability by markedly increasing the shelf life stability and improving the appearance (gloss, etc.) of enrobed centers

of all types.

STAGE 3-In order to complete the picture of chocolate crystallization and solidification, we will briefly consider the storage or holding stage. As pointed out previously and shown on the rate of crystallization curve, 100% crystallization apparently is never obtained upon discharge of the enrobed or deposited chocolate at the exit of the cooling tunnel. Our data clearly indicate that 10-15% of the fat is still in a non-crystalline state. This final crystallization must be accomplished under the proper storage conditions or the subsequent slow release of latent heat may affect the quality of the finished product, particularly the gloss. The enrobed or deposited goods should be held in a non-fluctuating, properly cooled room (60-70°F.) for at least twelve hours. Our data indicates that even then 100% crystallization is not always attained but that the last few per cent requires long periods of time. This definitely proves that the rate of crystallization of cocoa butter is slow and requires a long period of time, particularly after the main body has crystallized. (See curve on rate of crystallization). This final holding period also allows the whole mass to come to equilibrium with the storage temperature so that its subsequent removal to higher temperatures cannot readily cause any physical changes, particularly when excessive humidity conditions may prevail (avoid sweat-

In the operation of a cooling tunnel of the presented design, it is very important to recognize that its successful operation depends to a large degree upon the efficiency of the tempering (cooling) technique before the chocolate reaches the tunnel. It is not logical or reasonable to assume that any tunnel construction is a panacea or "cure all" for the continuous production of satisfactory and stable goods. Its function is only that of one part of a complex system which must be rigorously and accurately controlled throughout. The success of obtaining satisfactory goods with a long shelf life stability can be summarized and stated in words that have been presented before, viz., "crystallization at all stages under strict equilibrium conditions." Any short cut or deviation from the recognized basic principles of cocoa butter crystallization will only result in inefficient operation and unsatisfactory products. At the present time, too little is known concerning the fundamental mechanisms of the behavior of cacao fat upon cooling and solidification. However, great strides have been made at the Research Laboratories of Walter Baker & Company, Inc., and we are gradually acquiring a true picture of these very

essential principles.

Nothing has been mentioned about the part played by the proper temperature of the centers, molds, etc. since this manuscript is particularly concerned with the mechanism of crystallization and its application to cooling tunnel design. Nevertheless, these do play an important part and should be fully recognized, but it is beyond the scope of this paper to discuss them other than to mention that they must not be neglected when operating any chocolate tempering (cooling) and solidi-

fication system.

SWCA Sponsors Freight "Pass-Along"

A movement to secure OPA approval for candy manufacturers to add a percentage of their freight cost to the price of candy coming into the South has been initiated by the Southern Wholesale Confectioners Association in a letter from Secretary C. M. McMillan to Prentiss Brown, new director of the Office of Price Administration

in Washington.

Secretary McMillan addressed his communication to Mr. Brown when it became apparent that many manufacturers were declining to ship merchandise into the South because of the high freight costs and their inability to pass on these costs through a price increase. It is a part of the general program which the S.W.C.A. has been conducting over the past several months to improve the jobbers' volume situation in the South.

Under the General Maximum Price Regulations, "No seller shall require any purchaser, and no purchaser shall be permitted, to pay a larger proportion of transportation costs incurred in the delivery of supplies of any commodity or service, than the seller required purchasers of

the same class to pay during March, 1942."

Since the issuance of this order, there has been a general increase in freight rate. And this, together with the uncontrolled costs of many raw materials used in manufacturing candy has made it necessary for many manufacturers to confine their sales to territories within an area close to the plant, in order to remain on a profitable basis. In his letter to Mr. Brown, Secretary McMillan stated that he felt sure Southern consumers would be glad to pay the extra freight cost in order to be able to obtain merchandise to which they are entitled.

Secretary McMillan stated that if the relief were granted to the manufacturer, the wholesaler and retailer would automatically be provided for in the new method of price control which OPA is now preparing to install and which is based on a mark-up system instead of using the March, 1942, levels as a basis. Any increase in manufacturers' prices would automatically be reflected in

jobbers' and retailers' prices.

It was felt that the plea, coming from the jobber to the OPA, would have more effect than it would originating with the manufacturer. The Secretary pointed out that the effort was being made as much for the manufacturers who have continued to sell the South regardless of the freight cost as for those who have discontinued shipping the South. He said: "Southern jobbers can well be proud of those manufacturers who have sacrificed their profits in order to help keep the Southern jobbers going, and in appreciation for their loyalty, we feel that something should be done to relieve them of this extra burden.

Dollar Volume Up 16 Percent In January

Sales of manufacturers of confectionery and competitive chocolate products were 16% higher in January 1943, than for the corresponding period in 1942, according to announcement released by J. C. Capt, Director of the Census. The seasonal change between December 1942, and January 1943 was reported as a 12% decrease. Volume, too, was up in January. The quantity (based on pounds) sold in Jan. 1943 by 119 manufacturers was 4% larger than the quantity sold in January '42. Average price per pound was 20.5c in January this year; 18.8c in January '42; and 21.5c in December '42.

Modern Methods of

Candy Scrap Recovery

by W. H. CHILDS

Research Laboratories General Mills, Inc. In his second article, the author describes methods of recovering chocolate from coated candies and reclamation of confectionery fats

Inder the present situation in the supply of available chocolate, any practical method for recovery of chocolate and cocoa butter from returned chocolate-coated candies should find a highly receptive audience. But the problem is made doubly complex because chocolate is, first, a most complex substance in itself, and second, there are so many types and varieties of chocolate coatings used throughout the industry.

Any article, therefore, which treats the reclamation of chocolate, cocoa butter, and fats from scrap candy may be open to severe criticism unless certain clarifying statements are made at the outset. As used in the candy plant, chocolate covers a wide range of types and usages and its analysis is unusually difficult. Some chocolate contains sugars in various amounts; others contain milk, and so on. The refining of chocolate is, as a rule, outside the province of the candy manufacturing plant's work, and it is a highly developed art.

Let us concede, right at the beginning, that reclaimed chocolate will in no case compare with the original product. No method of reclaiming has yet been found to achieve that kind of results. However, a reclaimed chocolate—perhaps this might be named "choclaim"—may be used in candy pieces where chocolate color and "bouquet" are desired, but in which the distinct chocolate flavor characteristics are not so important. Such candies would be fortified with vanilla to provide the flavor characteristic.

Cocoa butter, on the other hand, may be recovered in a reasonably pure state. Other fats, too, may be recovered in a high state of purity, and that is also extremely important in these times when coconut oil and other fats favored for candy are in short supply. Thus, it is the author's hope that this article will serve to set candy superintendents thinking along these lines and, perhaps, giving the whole province of candy scrap recovery the benefit of their own experimental work.

Former Chocolate Recovery Methods

The usual method of recovering chocolate from coated candies has been, briefly, to melt the chocolate in the Our article this month was to have treated Pan and Gum Room Scrap Recovery. New information just received by the author necessitated revision which could not be completed in time for this issue.

kettle with water, screening out the nuts and fruits, then skimming the fat off the top of the melted batch. What was left after this skimming operation—an aqueous solution of sugars and "what not"—was then re-used in what the trade has been fond to call call "scrap pieces" and has usually sold to the low-class trade.

Another method that achieved a better separation was the use of several settling kettles or tanks. The scrap was heated with water and then put into the tank to cool off. When the fats rose to the top and solidified, the lower liquid portion was drained off.

Both methods are at best crude and wasteful. First, it is never possible to get 100% fat recovery by the skimming method. Second, both of these processes are very slow, since they depend on gravity settling. Finally, the fats so recovered are not entirely free from impurities and would require filtering, which is another slow and expensive process.

Newer Methods of Recovery

Newer methods of chocolate and fat recovery make use of the following equipment: A steam-jacketed kettle with an agitator; a screen; a centrifuge; and required piping and discharge vessels.

Put 400 lb. of the chocolate-coated candy into the kettle with 400 lb. of water. Melt the batch and agitate it during the melting process. Bring the whole batch up to a boil and then run it out over the screen to remove nuts and fruits and other solid ingredients. After the remaining batch has again been thoroughly agitated, it is then fed to the centrifuge. The bowl of the centrifuge will require cleaning about every 45 minutes. For the batch we are dealing with here, one intermediate cleaning and one final cleaning would be sufficient. The solids obtained as a result of this centrifuging process will be

left in the bowl in a hard, almost dry state. The liquid which has been centrifuged off consists of water and sugars, while the liquid fat portions will have been discharged from separate outlets in the centrifuge.

The cocoa butter or fat may be further purified by heating to 210° F. and then fed again to the centrifuge at about 75 gallons per hour, together with about 30 gallons of boiling water. In this re-centrifuging operation, no bowl cleaning will be necessary. The resulting purified cocoa butter may be reused just as it is, in the chocolate room. Running the cocoa butter with boiling water tends to wash out some of the fatty acids and volatile oils, thereby giving a superior product.

The dry bowl cake—the "choclaim"—may be mixed with cocoa butter and vanilla (vanillin) and re-used in lower-priced candies. It is a thoroughly clean product, but as mentioned previously, it will not be equal to the original chocolate. As an alternative, the dry bowl cake may be used in other candies just as it is, for its color, the other ingredients of the candy imparting the flavor and individual characteristics of the piece to be made.

The liquid portion which has remained after the centrifuging operation contains sugar and water. This liquid is free from suspended matter and pure in that respect, although its color precludes its use in any other than a dark colored candy. However, the color may be removed by addition of a suitable amount of decolorizing carbon and filter aid following, in general, the method outlined in our previous article (The Manufacturing Confectioner, Feb. 1943, page 14), but not trying to make either an inverted or a scrap candy syrup. The easier procedure is merely to use the filter aid and decolorizing carbon and secure a lighter colored syrup which should be brought up to a pH of about 0.6 before using, by the addition of a small amount of sodium bicarbonate. This syrup may then be used in a variety of pieces where a thin syrup is of no disadvantage.

The writer favors this treatment as against an invert syrup or scrap candy syrup because of the difficulty of obtaining from the scrap pieces a final product of such composition as to fit in with the other syrups mentioned. Furthermore, by the nature of the process involved in reclamation of the chocolate, a higher temperature is reached—which in itself well-nigh precludes the possibility of obtaining good invert. Should a test of this liquid produce evidence of the presence of starch in any quantity, further treatment will be necessary to remove the starch. Methods for doing this will be discussed in a subsequent article on recovery of Gum and Pan Room scrap.

Recovery of other fats from candy follows the same general procedure as outlined for removal of cocoa butter from chocolate-coated scrap candy.

In this connection, it might be mentioned, too, that occasionally certain fats are found in storage or elsewhere in the candy plant that are not of highest grade. These fats and oils may be purified by centrifuging, using a quantity of boiling water, just as was outlined in the fat recovery procedure in this article. If these oils are high in fatty acids, by laboratory test, the acids may be removed by treatment with soda. If such treatment is indicated, it is advisable to be careful in the amount of soda used. Such treatment will produce a vastly improved oil or fat when properly treated in the manner just mentioned.

The author wishes to express appreciation to the Sharples Corporation, and especially to Mr. Homer Cloukey of that firm, for assistance and information liberally given in the preparation of this article.

IN THE MAIL BAG

From Puerto Rico

We are not at present manufacturers of candy; however, we expect to get into it as soon as the shipping situation eases up. We plan to start in a small way, making pops. Could you let us have a good formula? Climatic conditions make it necessary to produce a piece that will stand up. Puerto Rico has a hot and humid climate. I have checked with the local weather bureau, and they have advised me that humidity here at times reaches a maximum of 98%. The average for the year is as follows: 9 a.m., 78%; 12 noon, 50%; 9 p.m., 80%. Another point to bear in mind is the present scarcity of corn syrup.

(Signed) J. J. M., San Juan

Reply: Here is a formula that may work in Puerto Rico, for pops: 60 lb. sugar; 9 lb. Invert; water to dissolve the batch. Cook up to 330° F. on open fire, being careful to prevent "grain." Kettle should be covered during the early stages of the cook, then the sides washed down, and cook completed with cover removed. The finished candy should test about 13% invert and less than 0.75% moisture. This batch will have to be run carefully on the pop machine, and temperature is important, for if the batch becomes too cold, it will crack. Starting with this 60-9 formula, should the invert test prove too high, you can adjust the invert content down so that the final test will give about 13%. Your toughest job will be protection against moisture absorption after the candy is completed. Pops must be well wrapped, and sticks should be waxed. If you cannot obtain air conditioning (dehumidifying) equipment for your working area, your best production time would seem to be around noon of each day, according to the humidity readings you have supplied.

Thank You

Since my firm has discontinued its subscription, I miss the most intelligent magazine on confectionery. Kindly enter my subscription for one year and mail to my home so that I may get all information first hand. (Signed) L. J. C., Philadelphia

Reply: Thanks, kindly, for your subscription and for your kind words. An occasional expression of this kind from our readers is a great encouragement to us to continue our efforts to produce a confectionery magazine of high quality.

Misunderstood

Occasionally I get a chance to glance at your publication and I have just been going through the February issue, and have two particular comments to make about it. First, there are certainly several excellent articles in this number, three of which I have read with much interest, namely, those of W. H. Childs, R. L. Kenny and the one by E. A. Back and R. T. Cotton. Each one deals with an important phase in the confectionery business today. . . . Here I was getting ready to write a note about the wonderful things in this number, when I got over to page 24, and I am wondering if you would read the paragraphs beginning at the bottom of the middle column under the heading "Flavoring Materials." That gave me an awful jolt, because it has been years since the Mediterranean region has been a real source of supply for either orange oil or lemon oil in this country, and there has not been any shortage of either orange, lemon, or grapefruit oil in this country, because Turn to page 30, please)

TECHNICAL LITERATURE DIGEST

By K. E. LANGWILL, Technical Editor

Starch Viscosity or Strength

W. L. Morgan and N. L. Vaughn, Ind. Eng. Chem., 35, 233-38 (1943).

FOR the complete characterization of a starch flow picture the MacMichael instrument appears best. For plant control and investigations involving large numbers of determinations, the simple funnel appears to offer advantages, provided care is taken to use it in the best ways; namely, an attempt should be made to secure values in the 10-25 range. Below 10 it is difficult to get duplicable data and certainly above 80 the differences indicated by the strength scale are mainly without actual significance.

British Food Technologists Improvise to **Meet Shortages**

H. B. Cronshaw, Food Industries 15, No. 2, 57 (1943).

AN interesting discussion is presented on how England managed to maintain its output of war time "ice cream" and "custard ice" even though denied "essential" ingredients. A high grade soya flour took the place of milk but when more than 3 per cent of the mix weight was soya flour a characteristic nutty flavor was imparted to the product. Wheat flour which had been converted to dextrines and maltose by the action of malt diastase replaced part of the soya flour.

The most satisfactory fats were found to be refined

deodorized palm kernel or coconut oil or hardened oils. Either glycerine monostearate or lecithin was the emulsifying agent employed. Sweeteners used included honey. glucose, invert sugar and even saccharin.

Comparison of Rats Fed an Evaporated Milk with Those Fed "Milk" in which Natural Fat Has Been Replaced by Coconut Oil

Smith Freeman and A. C. lvy, Journal of Dairy Science 25, 877-81 (1942).

CHEMICAL examination of a commercial evaporated milk and a "filled milk" (coconut oil substituted for butter fat) purchased on the open market yielded the following:

	Total Solids	Fat	Nitrogen	Ash
Evaporated Milk	26.4%	7.74%	1.06%	1.70%
Filled Milk	25.4%	6.00%	1.32%	1.59%

The growth of rats, fed the respective milks ad libitum, showed no significant differences after forty-nine days. During the next forty-eight days of the ninety-seven day experiment, the rats on whole evaporated milk showed significantly better growth. The difference in growth during the last half of the experiment may have been due to difference in gastro-intentinal tolerance for the two diets. No differences could be noted in bone ash, amount of liver fat, or hemoglobin.

Influence of Moisture on Browning Of Dried Whey and Skim Milk

H. Doob, Jr., A. Will-mann and P. F. Sharp, Ind. Eng. Chem. 34, 1460-68 (1942).

BROWNING of dried milk and whey in storage is affected by the relative humidity of the atmosphere. At room temperature browning is inhibited when the relative humidity is less than a critical value, lying between 20 and 30 per cent at 25°C. Browning is markedly accelerated at temperatures above 30°C. If the moisture content is low enough, little browning occurs in six months at 50°C. Dried wheys brown more on storage in atmospheres of high moisture content than do dried milks. Darkening is believed to be due to a reaction between reducing sugars and proteins.

"The Peanut, a Great American Food"

"At this time, when conservation of all our foodstuffs is necessary, special attention should be given to the peanut, one of America's best and cheapest foods . . . being rich in protein and in fat, it may also serve as a meat substitute. . . . Practically all confectioners and bakers use peanuts in making their products. Peanuts are used in peanut bars, peanut brittle, chocolate-coated peanuts, and chocolate bars, as well as in other types of confections, and also large quantities for salted peanuts."

25 YEARS AGO

"A pound of whole peanuts, as used in confections, peanut butter, etc., contains nearly one-half pound of fat and one-fourth pound of protein, both the oil, or fat, and the protein being of a very high grade and readily digestible. One pound of peanuts furnishes about 2,700 calories, while 1 pound of beefsteak yields less than one-third as much, and 1 pounds of eggs less than one-fifth that amount." YEARBOOK OF THE DEPARTMENT OF AGRICULTURE 1917 (Published 1918).

Amylose and Amylopectin Content of Starches Determined by Their Iodine Complex Formation.

F. L. Bates, D. French and R. E. Rundle, Journal American Chemical Society 65, No. 2, 142-48 (1943).

STARCH has been shown to possess two components which are quite distinct in their reaction with iodine to form iodine complexes. The term "amylose" is used to designate the straight chain fraction of starch and "amylopectin" the branched chain fraction. A potentiometric method has been developed for the rapid quantitative determination of the amylose component of starch. The amount of iodine bound by the amylose component of starch varies inversely with the iodine concentration.





"Fresh" Candies

During the past few months we have been carrying on our own little private investigation of candies available on the open market. Perhaps you have, too. You may have been struck by the smaller selections of candies of all kinds on the market, the very obvious reduction in lines by manufacturers, the appearance on the counters of your favorite candy store of lines and names that you had never seen before, of brand new items produced by your favorite candy house. But have you noticed this significant thing: that almost all of the candy you buy in these days is *fresher*, better eating, newer? This is the one outstanding characteristic we have noticed specifically with reference to bar goods.

Now, there is conflict among production men over the debatable question of whether new candy, fresh in point of time between leaving the production line and reaching the eater, is necessarily the best eating candy. Certain candies, say production men, require aging to give them their highest degree of palatability, and as aged beef is more highly prized than new beef. This may be true, technically speaking. But it would be difficult to convince the customer that the bar he bought last year-whose caramel center may have become hard and tough from overlong repose on the jobbers' and dealers' shelves-is a better eating bar than the one he gets now-a little less frequently, to be sure-whose center is nicely chewy, whose nuts are relatively fresh, and whose entire eating quality gives the strongest kind of evidence that it has been but recently produced.

Reflecting, as it does, an availability condition which would be regarded as serious in normal times, this newness of bar goods today, we believe, is a good thing for the industry. It indicates that old, shelf-worn and hoarded candy stocks are gradually disappearing. That there is now a more streamlined passage of candy from producer to consumer. That store stocks are snatched up more quickly. It is not the purpose here to discuss the inherent quality of ingredients being used in our candies today. We'll leave that for the Candy Clinicwhich sees a lot, knows what to look for, and excoriates poor quality of ingredients and workmanship in no uncertain terms. Nevertheless, this newness (or freshness, if you will) in our goods as it reaches the public is making new friends for candy. It is to be hoped that after the war, manufacturers, especially of bar goods, will attempt to organize their distribution in such manner that this "freshness" characteristic will remain as one of the good things to come to our industry out of the war experience.

Walter Belcher

n the passing of Walter Belcher, last month, the entire industry sustained a grievous loss. Mr. Belcher's outlook on industry problems was neither provincial or hide-bound, despite the fact that in recent years his activities had been devoted to the interests of a regional organization. In his conduct of the affairs of the New England Manufacturing Confectioners Association, he maintained a nice balance between various association activities which he directed. Outstanding among his accomplishments was the technical and production lecture series conducted under his direction at Massachusetts Institute of Technology, a few winters ago. It is a tribute to Mr. Belcher's standing as an executive and an industry leader that he had little trouble in attracting, as discussion leaders in this program, men who represented the very best technical ability in our own industry as well as in related industries. His own 30-odd years as a confecfectionery company executive gave him rare insight into problems, topics, and activities which belong on the wellrounded association agenda. This was obvious in his two terms as N.C.A. president and later, in his work for the New England association. The New England association will find it difficult to replace Walter Belcher.

Your Red Cross

his is Red Cross Month. During this entire 31-day period, the Red Cross is going to try to raise its 1943 War Fund, the goal of which is \$125,000,000. That means less than a dollar from each one of the 130,000,000 people who are today enjoying the benefits of our particular American brand of freedom. On the war fronts and on the home front, too, Americans are banded together in the world's greatest struggle to maintain that freedom. The Red Cross stands as the No. 1 organization for the alleviation of pain and suffering on the war front and the No. 1 bulwark against the ravages of storm, disease. and disaster on the home front. Your blood donation may save a boy's life; your money donation may be a real contribution toward maintenance of morale on the home front. The time is now, and the cause is as noble as any you will be called upon to aid, in war or in peace.



THE INDUSTRY'S CANDY CLINIC HELD MONTHLY BY THE MANUFACTURING CONFECTIONER

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of THE MANUFACTURING CONFECTIONER.

Salted Nuts; Chewy Candies; Caramels

CODE 3A43 Caramels—1c

(Purchased at a cigar counter, Chicago, Ill.)

Appearance of Piece: Good. Each piece is wrapped in wax paper.

Color: Good. Texture: Good. Taste: Good.

Remarks: One of the best 1c caramels that the Clinic has examined this year.

CODE 3B43 Chocolate Covered Peanuts— 1 1/4 ozs.—5c

(Purchased in a cigar store, Boston, Mass.)

Appearance of Package: Good. Printed

folding box.
Coating: Good.
Panning: Good.
Finish: Good.
Taste: Good.

Remarks: The best chocolate panned peanuts that the Clinic has examined this year. Well made and neatly packed.

CODE 3C43 Panned Corn Flakes —1 1/4 ozs.—5c

(Purchased in a drug store, Boston, Mass.)

Appearance of Package; Good. Printed folding box.

Size: Good.
Coating: Good.
Panning: Good.
Texture: Good.
Taste: Good.

Remarks: Piece is new and good eating. Suggest less coating be used as it overcame the corn flake taste.

Eric Lehman Says...

In making analysis of Chewy Candies, we find a large number of them are tough. One reason is the lack of fats, also that too much corn syrup is used, and, in many samples, the batch has been cooked too high. Chewy pieces are one of the oldest and best eating pieces of eandy, if made right. Use sufficient fats; do not use too much corn syrup, flavor or other "fillers" if you want to make a good chewy piece.

In making Caramels, we have found that we achieved a better texture and flavor if all ingredients were put in at the beginning of the batch. Do not stop the boil. Boil as quickly as possible. Use sufficient liquids to melt ingredients, but be careful not to use too much. The longer a caramel is cooked, the tougher it will

be. Be careful about old slab oil as it will ruin the flavor of the best caramel made. Never cut warm caramels as this will form a thin film of grain on the cut sides. In making cast caramels, be sure that the starch has a low moisture content or your caramels will "pick up" starch, also help to start a grain.

Salted nuts—We find that it is best to have nut meats warm before they are put into the hot oil. Do not use nuts that have been kept in a cold room. Be sure to have oil hot. It is best to use a thermometer to know the temperature of the oil before the nuts are put in. Do not use oil too long or if it has changed color. If oil is not to be used for a few days put it in a cold room until needed. Do not heat oil too quickly.

CODE 3D43

Caramels-11/2 ozs.-5c

(Purchased at a cigar counter, Chicago, Ill.)

Appearance of Piece: Good. Cellulose wrapper printed in red.

wrapper printed in rec Color: Good.

Texture: Too hard. Taste: Fair.

Remarks: Piece is like a hard taffy and lacked flavor.

CODE 3E43

Walnut Taffy Squares -2½ ozs.-5c

(Purchased at a cigar counter, Chicago, Ill.) Appearance of Package: Good.

Size: Good, 15 pieces, each wrapped in printed wax paper placed in a printed boat, cellulose wrapper.

Color: Good.
Texture: Good.
Taste: Good.

Remarks: The best package of its kind that the Clinic has examined this year.

CODE 3F43

Chews-% ozs.-lc

(Purchased at a cigar store, Chicago, 'Ill.)

8 pieces, each wrapped in paper, wrapped in printed cellulose wrapper. Color: Good.

Pure Imitation L Natural Fruit A Citrus FLAVORS

STRAWBERRY RASPBERRY CHERRY WILD CHERRY

LEMON ORANGE LIME

GEORGE LUEDERS & CO.

427-429 Washington Street, New York, N. Y. Chicago San Francisco

Texture: Good Taste: Good.

Remarks: The best 1c package of its kind that the Clinic has examined this year.

CODE 3G43

Panned Peanuts-1/2 oz.-1c

(Purchased at a cigar counter, Chicago, Ill.)

Appearance of Package: Good. Printed folding box.

Panning: Good. Finish: Good.

Taste: Good for a lc seller.

Remarks: A good eating 1c number.

CODE 3H43

Salted Unblanched Almonds —3/8 ozs.—5c

(Purchased at a cigar counter, Chicago, Ill.)

Appearance of Package: Good. Printed cellulose bag.

Size of Almonds: Good.

Roast: Good.

Texture. Good.

Salting: Good. Taste: Good.

Remarks: A good eating salted almond. Suggest bag be printed in a color instead of white.

CODE 3143

Pecan Mallow-11/4 ozs.-5c

(Purchased in a hotel lobby, Pittsburgh, Pa.)

Appearance of Package: Good. Glassine bag, printed in red, white and blue. Piece is made of tough marshmallow, pattie shape coated with light chocolate,

Coating: Fair.

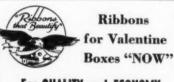
Center: Color: Good. Texture: Tough. Taste: Fair. Pecans: None.

Remarks: Not a good eating marshmallow and we failed to find any pecans in the piece.

CODE 3J43

Assorted Caramels—1 lb.—50c

(Purchased in a confectionery store, Burlington, Wis.)



For QUALITY and ECONOMY

We recommend our Welded-Edge Ribbons A: Widths and Colors

...mediate Deliveries Samples and quotations upon request



Sold in Bulk: Each piece is wrapped in a cellulose printed wrapper.

Vanilla Caramels: Color: Too dark.

Texture: Good. Taste: Fair.

Remarks: Caramels are not in the 50c a pound class. We have examined better caramels at 39c the lb.

CODE 3K43

Chocolate Coated Coconut Bar -2 pcs.-2 ozs.-5c

(Purchased in a cigar store, New York, N. Y.)

Appearance of Package: Good. Glassine wrapper printed in orange, blue and brown.

Coating: Good.

Center:

Color: Good. Texture: Good.

Taste: Good.

Remarks: One of the best coconut bars of its kind on the market, Well made and good eating

CODE 3L43

Salted Spanish Peanuts -1½ ozs.-5c

(Purchased in a cigar stand, Chicago, Ill.)

Appearance of Package: Good. Cellulose bag, printed in red, blue and vellow.

Roast: Good Salting: Good. Texture: Good. Taste: Good.

Remarks: One of the best salted Span-

ish peanuts on the market.

CODE 3M43

Molasses Peanut Butter Bar -11/8 ozs.-5c

(Purchased at a cigar stand, Chicago, Ill.)

Appearance of Bar: Good.

Size: Good.

Wrapper: Wax and glassine, printed

in yellow, red and blue.

Molasses Candy: Color: Good. Texture: Fair. Taste: Fair.

Center: Peanut butter: Fair.

Remarks: Suggest that more molasses be used as bar lacked a molasses taste. Peanut butter tasted as if it was mixed with flour or cornstarch.

CODE 3N43

Assorted Caramels—1 lb.—80c

(Purchased in a retail candy shop, New York, N. Y.)

Sold in bulk-Caramels are in wax cups-not wrapped.

Contents:

PD--

Vanilla Caramel:

Color: Good. Texture: Good. Taste: Good.

Vanilla Nut Caramel:

Color: Good. Texture: Good. Taste: Good

FLAVORS BY DREYER

For a really fine Grape flavor try our CONCENTRATED IMITATION

> FOR HARD CANDY \$8.00 Gal.

B

Use 11/2 oz. to 100 lb. batch candy Samples on Request

THE MANUFACTURING CONFECTIONER

FIRST CHOICE

FOR FINER JELLY CANDIES EXCHANGE CITRUS PECTIN

FIRST CHOICE FOR QUALITY: Jelly candies made with EXCHANGE Citrus Pectin are famous for their eating quality -freshness, flavor, and brilliant clarity-whether made cast or slab.

Feature them in all your packs and assortments.

They have a superior quality your customers recognize. The boys in our armed forces are eager for those tangy, fruit flavored Pectin Candies too.

FIRST CHOICE FOR PROFITS: EXCHANGE Citrus Pectin Candy cuts production time-sets and is ready for "sanding" in a few hours-packs easily in bulk. With EXCHANGE perfected formulas, you can be sure of a good batch-and good profits.

Confectioners everywhere are featuring Jelly Candy made with EXCHANGE Citrus Pectin. It's a proven way to step up sales and increase profits. Try it!



CALIFORNIA FRUIT GROWERS EXCHANGE

Products Department, Ontario, California 189 W. MADISON ST., CHICAGO * 99 HUDSON ST., NEW YORK

Copyright, 1943, California Fruit Growers Exchange, Products Depart

Chocolate Caramel:

Color: Good. Texture: Good. Taste: Good.

Chocolate Nut Caramel:

Color: Good. Texture: Good. Taste: Good. Raspberry Caramel: Color: Good. Texture: Good.

Taste: Good

Remarks: Good eating caramels but not to the 80c standard. Caramel did not have a good cream taste, had a condensed milk taste.

CODE 3043 Salted Spanish Peanuts 11/2 ozs.-5c

(Purchased in a cigar store, Chicago, Ill.)

Appearance of Package: Good. Wax bag printed in blue.

Roast: Fair.

Salting: None on peanuts.

Texture: Fair. Taste: Raw.

Remarks: We examined a bag of the same peanuts manufactured by their San Francisco, Calif. factory and they were one of the finest eating salted Spanish peanuts that we have examined this year. We suggest that the Eastern office get a sample from their Western factory for comparison.

CODE 3P43

CITRUS

PECTIN

Caramel and Nougat Assortment 1/2 lb.—40c—(80c the pound)

(Purchased in a retail store, San Francisco, Calif.)

Appearance of Package: Good. One layer type box. Brown with white cover that has a floral design printed in red. Name embossed in gold. Size: Good.

Contents: Caramels & Chews.

Vanilla Nut Caramel: Good. Plain Vanilla: Good.

Chocolate Nut Caramel: Good. Assorted Chews: Good.

Vanilla & Nougat: Good. Chocolate & Nougat: Good.

Assortment: Good.

Remarks: The best Caramels and Chews that we have examined in a long time. Very good quality and candy was well made.

CODE 3Q43

Assorted Caramels—1 % ozs.—5c

(Purchased at a cigar counter, Chicago, Ill.)

Appearance of Package: Good. 7 cellulose wrapped caramels on a board, cellophane wrapper.

Contents:

Vanilla Caramel: Color: Good. Texture: Good. Taste: Good.

Chocolate Caramel: Color: Good.

Texture: Good.

Taste: Good. Remarks: The best 5c caramel package that we have examined in a long time.

CODE 3R43 Salted Jumbo Peanuts -4 ozs.-10c

(Purchased in a drug store, New York, N. Y.)

Appearance of Package: Good, Plain cellulose bag with metal clip on top.

Size of Peanuts: Good. Roast: Good. Texture: Good. Salt: Good. Taste: Good.

Remarks: The best salted Jumbo peanuts that the Clinic has examined this year.

CODE 3S43 Salted Peanuts—11/4 ozs.—5c

(Purchased at a cigar stand, San Francisco, Cal.)

Appearance of Package: Good. Packed in cellophane bag with patent seal. Bag imprinted with Mr. Peanut trade mark.

Size: Good. Peanuts: Spanish: Good.

Roast: Good. Texture: Good. Salting: Good.

Remarks: One of the best 5c bags of salted peanuts that we have examined this year.

RIGHT, Lieut. Meeker!

Belting 15 important to efficient Cooling Tunnel and Enrober operation. That is why we urge candy men to specify

BURRELL BELTING

Years of study of coater and tunnel problems has produced in these belts auxiliary equipment that will meet all requirements satisfactorily.

- I. CRACK-LESS Glazed Enrober Belting
- 2. Double Texture White Glazed Enrober Belting
- 3. THIN-TEX CRACK-LESS Enrober Belting
- 4. Bottomer Belts (endless)
- 5. Feed Table Belts (endless)

Proven ability to "take it" has placed BURRELL Belting in practically all Confectionery Plants. Why not yours?

"BUY PERFORMANCE"

BURRELL BELTING COMPANY

413 S. Hermitage Ave., Chicago, Ill.



CONFECTIONERS' BRIEFS

Fire Destroys Candy Plant in Ontario

Fire of unknown origin, on Feb. 16, completely destroyed the plant of the C. H. Doerr Co., Ltd., of Kitchener, Ontario. Estimated loss is nearly a half million dollars. One employee, a night watchman, lost his life in the blaze. The building was only partly covered by insurance. Plans have already been laid to rebuild the plant, according to Carl M. Doerr, president, and L. A. Dunbar, general manager. Until the new factory can be completed, some of the Kitchener employees of the company will be employed at the Howe Candy Co., in Hamilton, which is controlled by the Doerr Company.

Huyler's Net For Year—\$149.416

Net income for the 12-month period ending Dec. 31, for Huyler's, totaled \$149,416, equal to \$3,32 a share on the \$2 first preferred stock in arrears, after the reserve of \$100,000 for estimated federal income taxes. This compares with \$141,071 net income for the period ending Sept. 30, 1942.

Loft Candy Shows \$397,974 Net Income

Loft Candy Co., New York, reports net income of \$397,974 for the year ended Dec. 31, 1942, equal after charges and federal income taxes to 28c a share, compared with net income of \$5,804, or less than 1c a share in 1941.

WPB Allows 100% Glassine Production

War Production Board recently ruled that manufacturers of glassine, grease-proof and genuine vegetable parchment papers may produce up to 100% of quantities made during the base period under which they are operating. The base period is for six months ending March 31, 1942. These types of wrapping materials had a quota of 85% before issuance of the amendment.

Cracker Jack Man Heads Traffic Club

Peter J. Klein, traffic manager for the Cracker Jack Co., Chicago, was elected president of the Junior Traffic Club of Chicago, recently, succeeding Ray deGroodt.

New York Firm Moves to New Location

Mignon Chocolate Co., manufacturer of chocolates, formerly located at 142 W. 24th St., New York, have moved to a new location at 126 W. 22nd St., New York. The Mignon firm recently bought out the Silver Sweet Co., also of New York.

Patterson, McNutt On Candy Broadcast

Undersecretary of War Robert P. Patterson was the March 7 speaker on the national radio program being sponsored on a weekly basis by the Council on Candy

EASTER

may well be proud is to be found in Merckens Chocolate Coatings.
The finest of raw materials are used in our famous process.





MERCKENS CHOCOLATE CO. INC.

506 Seventh Street, Buffalo, New York

BRANCHES: Boston, Mass., 131 State Street New York, N. Y.: 250 East 43rd Street Los Angeles, Calif.: 3442 West 8th Street AGENCIES: Chicago: Handler & Merckens, Inc., 180 West Washington Street Salt Lake City, Utah: W. H. Bintz Company Denver, Colo.: Western Bakers Supply Company



Gives You

FLAVOR . AROMA . STABILITY

Imitation Oil of Cassia available in large quantities. Please ask us about imitation and true fruit flavors for all candy purposes.

STANDARD SYNTHETICS, Inc.

119 West 25th Street, New York, N. Y.

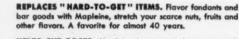
Branches in Chicago, San Francisco, Kansas City, Mo.



HERE'S an old friend to help on those new problems that are everybody's headaches now—shortages, restrictions, rising costs.



FORTIFIES CHOCOLATE. You're making coatings thinner to meet government requirements, using less cocoa and chocolate in fondants and bar goods. Make what chocolate you do use taste more "chocolaty" by adding Mapleine to dip and fondant formulas. You can use less chocolate when you boost its flavor with Mapleine.



HELPS CUT COSTS. Mapleine is economical, concentrated. A little flavors a lot. Saves you money. Learn more about Mapleine. Order from your regular supplier or write Crescent Manufacturing Company, 659G Dearborn St., Seattle, Wash.

MAPLEINE
IMITATION MAPLE FLAVOR
7he Extra-Help Flavor in Wartime



as Food in the War Effort. Paul V. McNutt, chairman of the war manpower commission, was the guest speaker on the March 14 broadcast. The program features Ernest K. Lindley, newspaper columnist and editor, as commentator and prominent Washington personalities as guest speakers on various phases of the rationing program.

Heide Heads Red Cross Drive

William F. Heide, president, Henry Heide, Inc., New York, heads the Confectionery Committee working with the rest of the food industries in New York to raise \$13,000,000 for the Red Cross War Fund, the drive for which was launched March 1.

McKeand of Brach Address Cost Accountants

M. L. McKeand, member of the industrial engineering department of E. J. Brach & Sons, Chicago, recently made the principal address before the Chicago chapter of the National Association of Cost Accountants. Mr. McKeand spoke on "Time and Motion Analysis" for more effective use of manpower.

Regional WPB Officer May Service PD-1A Certificates

Donald M. Nelson, chairman of the War Production Board, announced late in February that the 12 Regional Offices may assign preference ratings on PD-1A certificates for delivery of materials valued at \$100 or less, beginning March 15. Preliminary valuation limit of \$100 will be progressively stepped up as the field offices assume greater responsibilities. PD-1A certificates are used to secure materials needed in emergencies.

National Candy Net Income Up

National Candy Co., St. Louis, Mo., reported a net income of \$1,380,481 for the year ended Dec. 31, 1942. This is after provisions for post-war repairs, taxes, etc. The net per share was \$6.45, which compares with a total net of \$1,049,924, or \$4.74 a share in 1941.

Hershey Chocolate Nets \$5.62 Per Share

Hershey Chocolate Corp., Hershey, Pa., reported net income for the year ending Dec. 31, 1942, of \$5,126,114, or \$5.62 a common share, compared with \$5,943,925, or \$6.81 a common share in 1941. Tax provisions totaled \$5,510,731, after a postwar credit of \$275,812, against \$3,468,104 in 1941. Earnings are subject to possible government contract renegotiation adjustment.

Wartime Packaging Exposition in April

The extent to which packaging, packing and shipping industries have integrated their industries with the war effort will be highlighted at the Wartime Packaging Conference and Exposition, to be held at the Astor hotel, New York, April 13 to 16. Reports from exhibitors to the American Management Association, sponsor of the event, indicate that exhibits will be concerned exclusively with presentation of companies' products and services for war and essential civilian needs.

Three OPA Rulings On Extra-Quota Sugar

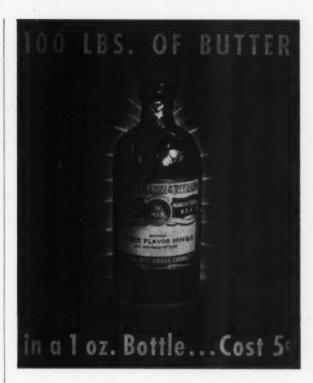
OPA recently issued three orders which affect candy manufacturers who are selling to government agencies. General Ration Order 3m, effective March 1, provides that Government agencies classed as exempt purchasers under various food rationing programs shall open ration banking accounts on which they may draw checks rather than purchase certificates previously used. GRO 5, Amend. 3, effective March 1, authorizes commanding officers of troops to issue "emergency acknowledgment" for rationed foods served by railway dining car, restaurant or other institutional users where ration checks are not available. This also applies to purchase of candy by appropriates officers in charge of troop trains or appropriate officers in charge of troops while on maneuvers. GRO 5, Amend. 4, effective March 1, provides procedure for military and naval service PX stores and ship service department ashore to obtain rationed food to meet requirements when they are unable to open ration banking accounts during March.

New Order on Quota-Exempt Sugar Delivery

Amendment 45 to Ration Order 3, relating to Sugar, authorizes the Army Exchange Service of the War Department, the Bureau of Naval Personnel of the Navy Department, and the Marine Corps to issue checks under the ration banking system to replace sugar in products delivered, respectively, to Army Exchanges, Ships Service Departments Ashore at Navy or Coast Guard Stations, and to Post Exchanges at Marine Corps barracks or Marine Corps bases. In the case of the Army PX stores, this applies to all deliveries made on or after July 15. 1942. In the case of the Navy Stores and Marine Corps stores, it applies on all deliveries made on or after Dec. 7. 1942. Each check shall be issued to the registering unit which used sugar in the production, manufacture or processing of materials used therein. The weight value of the check thus issued to a registering unit shall not exceed the amount of sugar used by such registering unit in such products or materials. The total weight value of checks issued in any period specified by OPA shall not exceed the amount allocated for the purpose of this section by OPA to such agency for such period. Amendment 45, Ration Order 3, became effective March 2, 1943.

P-140 Restricts Shipping Containers

Preference Rating Order P-140, issued by WPB on Feb. 24, aims to assure adequate distribution of shipping containers for the packing of military and civilian products. The order incorporates five lists of products for which preference ratings are established, but none of the five contains any direct reference to candy and confectionery-which would seem to indicate that at the present time, at least, this industry is without any sort of rating so far as shiping containers are concerned. However, the WPB release accompanying the copy of the order states that "these (listed) products are not the only essential products being produced, and they will not require all the containers produced. Accordingly, there will be millions of containers available for products which are not listed." Where a producer or shipper experiences difficulty in obtaining shipping containers from his usual source, he may apply for a rating on Form PD-802, which is to be sent directly to the WPB, Containers division, Washington, D.C.



100 lbs. of butter in that 1 oz. bottle? Not all the bulk, of course, just the equivalent flavor fresh from the MM&R flavor laboratories to you.

Nowadays when butter is being doled out in quarter-pounds, the public's fancy for butter-flavored candies has hit an all time high. To many a confectioner appraising the butter situation, MM&R's Butter Flavor provides the answer at an almost unbelievably low price.

This laboratory-made flavor is oil soluble, thoroughly wholesome and has the rich aroma and fine flavor of fresh from-the-creamery butter.

Write for a testing sample and schedule of prices today! Our analytical department will be happy to furnish advice as to the best method of employing Imitation Butter Flavor MM&R.

BUTTER FLAVOR MM&R



Dare You Plan For 1944?

War has changed the entire complexion of candy distribution. Civilian markets now take third rank behind our Armed Forces, and the millions active in Production for Victory.

THE MARKET

Army PX Buyers, Ship Service Store Buyers, Marine Corps PX Buyers, War Plant Distributors, Jobbers selling to War Plant Commissaries . . . Syndicates, Chains, Food Distributors, Retail Buyers, etc. Over 9,000 total distribution.

THE COST

Less than postage on penny card sent to this entire list. Cost is so low as to be within the reach of the smallest manufacturer in the country.

9000 Buyers Want Your Message!

W HERE does your own distribution fit into this picture? Have you sought a positive means for bringing your candies to the attention of Armed Forces Buyers, and those who supply our second line of offense, the War Workers? Better investigate; these are the most important markets now.

In the Directory for 1944 you have the most direct line of communication between your plant and these buyers. The Directory gives complete coverage of PX Buyers and War Plant candy distributors.

Write TODAY for Rates & Information

THE Candy Buyers DIRECTORY

Published by THE MANUFACTURING CONFECTIONER CHICAGO-400 W. Madison St. NEW YORK-303 W. 42nd St.

MAIL BAG- (Continued from page 20)

California is able to supply the needs and even to export oil, as it has been doing. Aside from this, I still think your February issue is excellent.

(Signed) C. P. W., California

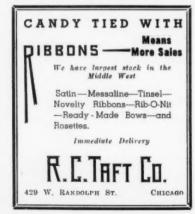
Reply: This particular issue has caused considerable comment in the industry. In checking back on page 24, you will find that this material is a portion of the article written by R. L. Kenny covering the English confec-tionery industry. It refers entirely to conditions in England and has no reference to the situation in America. We felt this article so well illustrated the handicaps under which our British contemporaries are operating that it was well worth reproducing. Nevertheless, we are grateful for your expression concerning our February issue.

Reprints

We want to thank you for the splendid manner in which you presented our story in your February issue. We would like to have 500 reprints of this article, and would appreciate advice on cost and how soon we could receive the reprints. Our purpose is to divide these reprints among our salesmen so that they can, in turn, distribute them to some of our customers.

(Signed) C. M. S., Missouri

Reply: Thanks for your order of reprints. We are having these run off immediately. In accepting your thanks, may we state that your firm is worthy of highest commendation, first, for the manner in which you have solved a difficult problem, and second, in the way you have contributed directly to our War Effort.



CONFECTIONERY BROKERS

DONALD A. IKELER

2029 E. Main Street KALAMAZOO, MICH. Territory: Michigan

H. L. BLACKWELL COMPANY

Emery Way at Sunset Drive EL PASO, TEXAS

Territory: Texas, New Mexico and Arizona

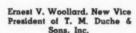


TAFFEL BROS., INC. Madison Ave. New York, N. Y.

SUPPLY TRADE NEWS

Woollard Made Vice President of Duche

Ernest V. Woollard has been appointed vice president of T. M. Duche & Sons, Inc., New York, according to an announcement issued the middle of February. Mr.





Woollard continues as general manager of the company's branch in Chicago, in charge of sales throughout the territory served by that office.

Monsanto Earnings \$5,515,836 For '42

Net earnings of Monsanto Chemical Company and its American subsidiaries in 1942 and after taxes and deduction of minority interest were \$5,515,836, the equivalent of \$3.75 a share, compared with \$4.91 in 1941, the annual report of Edgar M. Queeny, president, to stockholders disclosed. Although sales increased 81/2% to almost \$70,000,000, net income after taxes decreased 18%. The company's annual report was stripped of information and interpretations which have accompanied the annual report in the past few years.

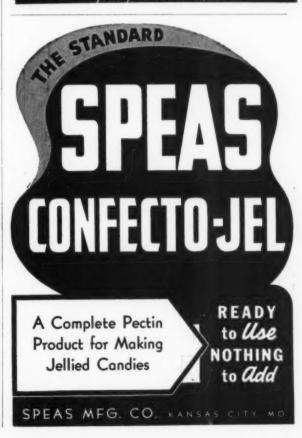
Tennant, Ucopco Manager, Dies

T. R. Tennant, general manager of the United Chemical and Organic Products division of Wilson & Co., Chicago, died at his home in Hammond, Indiana, March 1. He was 59 years old. A former president of the Hammond Chamber of Commerce, Mr. Tennant is survided by his widow, Mrs. Mary Tennant; two sons, Lieuts. Thomas N., and Lawrence; and a daughter, Mrs. S. Myers.

High Repair, Maintenance and Supplies Priority

WPB on Feb. 9, issued Regulation 5 to the Controlled Materials Plan setting up high priorities for maintenance, repair and operating supplies. Schedule I of this order grants AA-1 priority ratings for industrial food production, processing, packaging, preservation and storage for the securing of maintenance, repair and operating supplies. Under this order, "maintenance" means the minimum upkeep necessary to continue a facility in sound working condition. Neither "maintenance" or "repair"





IT'S EASY TO MAKE "SWEE-TEEN" SYRUP

"SWEE-TEEN" INVERT SUGAR SYRUP 3 oz. "Swee-Teen" \$.:
100 lb. Sugar
50 lb. Water
Boil for 30 Minutes at 217° F 6.00 .00

RESULTS

145 lb. Syrup replacing granulated Sugar pound-for-pound, for \$6.37

NATIONAL FOOD PRODUCTS

624 W. Jackson Blvd.

Chicago, III.

IN PEACE OR IN WAR Unvarying Quality HOOTON Chocolate Coatings HOOTON CHOCOLATE CO.

NEWARK, N. J. EST. 1897



WISCONSIN, U. S. A.

LIGNIN VANILLIN, C. P.

A Finer Vanillin of Exquisite Aroma. A NATURAL SOURCE Vanillin originated and manufactured in the United States. AROMATIC CHEMICALS AND ESSENTIAL OILS FOR FLAVORING PURPOSES.

AROMATICS DIVISION GENERAL DRUG COMPANY

644 Pacific St., Brooklyn, N. Y. 9 S. Clinton St., Chicago 1019 Elliott St., W., Windsor, Ont.

Since 1881, The Hubinger Co., Keokuk, Iowa

Our service departments will help you with any of your technical problems.

UNIFORM...DEPENDABLE

Confectioners' Corn Syrups, Thin Boiling Starches, Moulding Starch



includes the improvement of any plant, facility or equipment by replacing material which is still useable, with a material of better kind with the following exception: Minor items of productive capital equipment and minor capital additions or replacements not exceeding \$500 (exclusive of labor cost) may be included, provided that no capital equipment, addition or replacement aggregating more than \$500 in cost shall be subdivided for the purpose of coming within the definition. Special certification, manually signed, must accompany an order for supplies under this ruling.

Chocolate Order M-145 Now Food Distribution Order 25

The Department of Agriculture on February 27, took over administration of the War Production Board Order M-145, relating to restriction on the use of cocoan beans and cocoa products in the manufacture of chocolate shot, hollow-moulded novelty items, solid chocolate novelty items, partially or wholly coated novelty items, partially or wholly coated miniature pieces, and chocolate decora-tion (other than "stringing"). The Order is now known as FDO-25. It is in no way different from the original M-145.

Mineral Wool Standards Established

National Bureau of Standards, U. S. Dept. of Commerce, in cooperation with the Industrial Mineral Wool Institute, announced on Jan. 29, 1943, the establishment of Commercial Standard CS 105-43, mineral wool; loose, granulated or felted form, in low temperature installations. The new Standard covers both cold storage area and pipe line mineral wool insulation. It includes recommendations by engineers in the refrigeration field, generally, in addition to the recommendations of the Institute's Specifications Committee which carried out extensive research on the subject.

Roller Milk Powder **Traded for Spray Dried**

Department of Agriculture announced, Nov. 13, that the A.M.A. would sell 15 million pounds if its present stock of roller dry skim milk to manufacturers and handlers supplying spray dry skim milk to designated Government agencies during November and December. This action was taken to aid the industry in supplying additional roller powder to take the place of spray powder for domestic use during the period of seasonally low production.



TRADE MARKS

The following memorandum relating to Trade Marks is made available through an arrangement with James Atkins, registered patent attorney, Munsey Building, Washington, D. C. The trade-marks were recently published by the U. S. Patent Office and, if no opposition thereto is filed within 30 days after the publication date, the marks will be registered.

RIDLEY'S. Ser. No. 445,998. The Metro Chocolate Co. Inc., New York, N.Y. For candies.

ESKIMO PIE. Ser. No. 456,685. Eskimo Pie Corporation, Bloomfield, N.J. For ice cream.

RIDLEY'S NEW YORK and picture of girl wearing poke bonnet. Ser. No. 445,999. The Metro Chocolate Co. Inc., New York, N.Y. For candies.

BEHOLD and picture of rising sun. Ser. No. 456,915. Michael J. Batelja, doing business as M. J. Batelja Co., Portland, Oreg. For flavored popped corn.

Gum Arabic From Sudan World's Best

Interesting information concerning gum arabic production in the Sudan are given in the Journal of the Anglo-Egyptian Chamber of Commerce, according to an item appearing in the Confectionery News (London) recently. Sudan gum arabic is quite the best in the world, says the News, no other country seeming able to produce the same quality. It is used not only in the manufacture of confectionery, but in pharmaceutical preparations, cotton and silk, and in certain war materials. The gum is obtained from acacia trees by a special method used by the natives of the Sudan. During the rainy season, which lasts from June to the end of September, the acacia trees are covered with green leaves. But in October these leaves start to dry, and the natives commence to cut the trees on two sides. About 40 days later, gum begins to exude from the branches and is collected and brought to market. The crop varies from 12,000 tons to 22,000 tons a year. Senegal is the only other country producing a similar gum. However, this is considered inferior in quality. It has an annual production of about 5,000 tons.

CLEANING TIPS for wartime

confectioners

Conserve Time, Effort in **Cleaning Pans and Trays!**

Want to remove gum, chocolate, syrup and other deposits from your wood candy pans, starch trays and similar equipment more quickly and easily? Then use OAKITE COMPOSITION No. 62 TION No. 63 or other recommended Oakite material in a tepid solution. You will find you can do the work WITHOUT any long. long, any hard scrubbing.

Moreover, because Oakite cleaning is so thorough, it helps assure QUALITY CONTROL in subsequent processing operations. Write today for full details.

OAKITE PRODUCTS, INC.
36C Thames Street. New York. N. Y.
Technical Service Representatives in Principal

CITRIC ACID TARTARIC ACID CREAM OF TARTAR SODIUM CITRATE



CHAS. PFIZER & CO., INC.

81 MAIDEN LANE, NEW YORK, H. Y.

444 W. GRAND AVE., CHICAGO, ILL.

I C TARTARIC CREAM OF TARTAR SODIUM CITRATE

We take great pride and pleasure in announcing the election of L. RUSSELL COOK as Vice-President March first, 1943 W. A. CLEARY CORP. New Brunswick, A. J.



Visit us at the PACKAGING EXPOSITION

April 13-16 Hotel Astor New York BOOTH 406 Gremlins just love to get into machines that have been improperly lubricated. And do they go to town when they find a machine that's being run by an insufficiently instructed operator! We've made all of our wrapping machines as gremlin-proof as possible. We've even guarded against a certain amount of carelessness. But in these days, when machines just can't be replaced, one has to take extra care.

See that operators know the machine thoroughly. Especially important now, when old hands must often be replaced.

Clean regularly. A clean machine works better, and the operator takes pride in it – gives it better care.

Lubricate at regular intervals — and see that the right lubricants are used.

Inspect regularly. Timely tightening up or adjustment, and replacement of worn parts will help prevent breakdowns.

Get authoritative advice when you need it. If in doubt about the care of any part of the machine, ask us. We may be able to save you valuable time and expense. If, in spite of all, the Gremlins do get in, we'll do our best to give you prompt assistance.

PACKAGE MACHINERY COMPANY, Springfield, Massachusetts NEW YORK CHICAGO CLEVELAND LOS ANGELES TORONTO

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines



THE Manufacturing RETAILER



New Problems Confronting Retail Manufacturers of Candy

by R. E. CHUMASERO, JR.

New York Manager Merckens Chocolate Co., Inc.

hen Paul V. McNutt, War Manpower Commission Chairman, issued his now famous announcement through the Selective Service Bureau listing 65 activities and job occupations which are to be nondeferable after April 1st, further problems were immediately created for the manufacturing retail confectioner.

The shortage of man power which the order will create, in addition to the existing shortage, means that more attention than ever before must be given to finding ways and means to combat the situation.

One of the first steps recommended is the shortening of hours during which retail candy shops are opened to the public.

In the Metropolitan New York area much attention has been given this subject. Before the Christmas holidays several retail groups had already put short hours into effect. Immediately after Christmas, several others followed suit. The hours maintained at the present time by some of the well known New York retail shops follows:

Fanny Farmer-12 noon to 6 p. m. weekdays

Closed Sundays

Barricini 9 a. m. to 7 p. m. weekdays

Closed Sundays
Flora Mir— 9 a. m. to 7 p. m. weekdays

Flora Mir— 9 a. m. to 7 p. m. weekdays Closed Sundays

Barton's Some stores—10 a. m. to 8 p. m.

weekdays
Others—11 a. m. to 9 p. m.
weekdays

Sundays 11 a.m. to 7 p.m.

Gregor— 10 a.m. to 8 p.m. weekdays

Sundays 11 a.m. to 6 p.m.

An executive of one of the groups operating store hours from 9 a.m. to 7 p.m. pointed out to the writer that this made possible a very practical working shift for their girls. One girl starts at 9 a.m. and works until



R. E. Chumasero, Ir.

6 p.m. and the second girl comes at 10 a.m. and works through until 7 p.m.

Naturally, neighborhoods differ. Hours that are satisfactory for a business or transient section do not always work out for a neighborhood store. In the neighborhood shops a later opening and closing hour would seem a solution.

In Greater New York many of the individually-owned confectionery shops, in addition to featuring their own make of chocolates and candies, have luncheonettes and operate fountains and have table service for ice cream and sodas. Their problem differs from the shops selling candy exclusively. Some of the owners of these establishments have decided to close one day a week, the choice of most seeming to be Monday or Tuesday. In some neighborhoods, however, Sunday closing would be preferable.

In this matter of shortening of store hours it should be kept in mind that there is a resultant saving of fuel, light and power, as well as manpower. This saving is genuine co-operation with the Government conservation program.

While the shortage of chocolate coatings continues and the present 60% quota for the first quarterly period many be continued in the next period, it is possible, in line with the new War Manpower Commission ruling, that labor will be more of a problem than materials, as time goes on.

It is suggested that a monthly check-up be made of your various candy centers. Find out which pieces have dropped in sales popularity. Simplify the formula of centers requiring an unusual amount of labor. Reduce the variety of centers being offered and make larger batches of numbers which require the minimum of labor. Naturally, it would be wise to feature pieces for which materials are more readily obtainable.

While week-end specials at price concession over the standard schedules are being discontinued for the duration, it would be smart to feature at regular prices a week-end special made from easily obtainable materials and using a minimum of labor and time to manufacture.

Simplify your packages as to style and number. Stick to a few designs, shapes and weights. Most confectioners have been doing this, but a further checking up along these lines would be worthwhile at this time.

A New York City retailer on a recent Sunday, one of his most active selling periods, removed all trays of bulk chocolates from his show cases and in their place displayed opened boxes of his various assortments of chocolates and home-made types. While a few of the regular customers who were previously in the habit of picking out their own varieties from the bulk trays objected to being asked to purchase a ready-packed box, there was a general acceptance of the plan. Much time was saved in selling and more people were served.

The plan adopted by the Dimling Shops of Pittsburgh, as described in the January issue of The Manufacturing Confectioner, is worthy of real attention. These shops display a wide variety of half pound kitchenpacked trays from which the customer chooses. Each tray may be sold by itself or combined with other units to make up one pound or larger sizes. A splendid time saving idea.

Due to a demand greater than available supplies, most retailers in New York City during the Christmas holidays placed restrictions as to the number of pounds of candy which might be purchased by each customer. Early in February a leading national retail confectionery group announced in their New York stores that only one pound of candy could be purchased by any customer. However, if a shipment was to be mailed direct to a service man at camp, two pounds could be purchased. This trend of restricting purchases will no doubt become the rule in most retail shops for the duration.

In conclusion, a pertinent slogan at this time might be "SAVE LABOR and SURVIVE." Then you will be ready to forge ahead again when Victory, which today is one day nearer, arrives.

Brach Employees Get Vitamin Tablets

Among factories which have introduced vitamin programs for their employees in an effort to reduce lost time and improve worker health is the E. J. Brach & Sons Co., of Chicago. In announcing its program the company gave each employee a printed letter which read, in part: "It is our company's sincere desire to cooperate and aid the National Health Program in every way. We have, therefore, procured a supply of vitamin capsules which contain liberal amounts of all-important vitamins and minerals needed by everyone every day. These are to be given to employees of certain important departments to see whether or not we can decrease absences due to colds and other minor illnesses. This company wants to provide its employees with every known scientific aid in maintaining the best health. The vitamins are expensive. A similar formula purchased at any drug store costs about 12c a day for the two capsules which we will furnish you free. You need not take them if for any reason you prefer not to. Simply advise your superintendent that you do not desire to take part in the program, and it will be perfectly satisfactory to us, and your standing will not be affected in any way." The company distributes two capsules, one of vitamins and one of minerals, to each worker desiring them just after lunch each day. Superintendents, or supervisors, handle the distribution.

Hayward Heads Paper Technical Group

Ralph A. Hayward, president and general manager, Kalamazoo Vegetable Parchment Co., Parchment, Mich., was re-elected president of the Technical Association of the Pulp and Paper Industry, at the 28th annual meeting of that group held in New York Feb. 15. J. D. Malcolmson, technical director of the Robert Gair Co., Inc., New York, is a member of the association's executive committee.

-Lecithin-

Patent 1,781,672 is now void and the use of Lechithin in Chocolate is without any Patent restrictions.

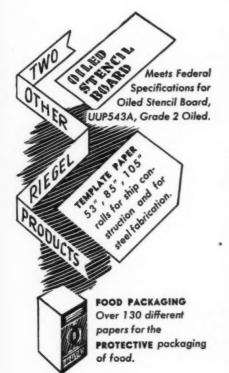
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to solve almost any paper problem. Our four mills make over 230 different grades for packaging, printing, converting and special industrial use—papers that have been tested, approved and adopted in all fields. If we cannot help you, we will be glad to refer you to someone else who can. Write us your requirements.

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By Arthur W. Knapp.

A complete treatise on the methods of preparing cacao for commercial use. The book contains chapters on the fermentation of the pulp, changes in the interior of the bean, the production of acetic acid, ripeness of the pods and improved methods, alternative methods to fermentation and production of armoa, temperatures of fermentation, and information about drying.

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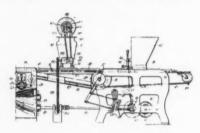
The following memorandum relating to Patents is made available through an arrangement with James Atkins, registered patent attorney, Munsey Building, Washington, D. C. The trade-marks were recently published by the U. S. Patent Office and, if no opposition thereto is filed within 30 days after the publication date, the marks will be registered.

2,253,938

CONFECTIONERY MOLDING MACHINE

William Melody, Chicago, Ill., assignor to E. J. Brach & Sons, Chicago, Ill., a corporation of Illinois. Application October 1, 1937, Serial No. 166,712. 6 Claims. (Cl. 107-3)

1. A candy molding machine comprising in combination with confectionery molding trays of starch having

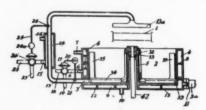


recesses therein, a conveyor for said starch trays, means for intermittently advancing said conveyor by movement stages substantially equal to one tray space of said conveyor, a depositor disposed above said conveyor having controllable discharge openings and plungers for feeding streams of confectionery into the recesses of each succeeding tray, and means operable during the period when said trays are moving under said depositor for moving said plungers for causing a continuous feeding of confectionery onto each succeeding tray during the movement under said discharge means of each succeeding tray respectively and also for moving said plungers for stopping the feeding of confectionery during the time when no tray is located under said openings.

2,255,986 APPARATUS FOR CONDITIONING CHOCOLATE OR THE LIKE

Edward D. Rapisarda, Agawam, Mass., assignor to Baker Perkins Company, Inc., Saginaw, Mich., a corporation of New York. Original application September 4, 1937, Serial No. 162,560. Divided and this application December 4, 1939, Serial No. 307,871. 3 Claims. (Cl. 257-4)

1. Apparatus for conditioning chocolate and the like comprising in combination, a cylindrical reservoir having

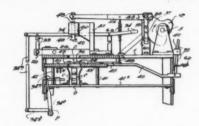


upright side walls and a circular bottom, outlet means from the reservoir adjacent the bottom, means for heating said side walls, means for cooling said bottom, agitator means and pump means for removing cooled chocolate from said bottom and impelling it through said outlet, thermostatic means for controlling the temperature of the side walls in response to the temperature of the chocolate, and conduit means connecting said outlet to a point of use of the chocolate, means for applying heat to the walls of said conduit, a thermostat in said conduit beyond said heating means, and means operable responsive to said thermostat for controlling the temperature of said conduit heating means.

2,257,463 CANDY WRAPPING MACHINE

George Grafton Goodwyn, Dallas, Tex. Application April 13, 1940, Serial No. 329,419. 2 Claims. (Cl. 93—2)

1. A machine for wrapping and sealing candy carried on a stick, in combination with a wrapping material

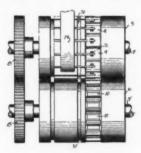


feeding mechanism, said wrapping and sealing being carried out by the provision of a pair of forked and notched plates adapted to be slid one within the other, a pair of angular arms pivoted to the plates, a bar pivoted to the arms, and means for reciprocating the bar to move said plates inwardly and outwardly in the operation of pressing the wrapping material around the candy on the stick and releasing the bars from the same; said machine including a cage for holding the candy in position while being wrapped and sealed and a reciprocable rod movable into and out of the cage for releasing the wrapped candy therefrom.

2,274,864 CANDY FORMING MACHINE

Edward E. Cahoon, Racine, Wis. Application February 3, 1940, Serial No. 317,150. 7 Claims. (Cl. 107-8)

 In a candy forming machine of the character described: a molding die having a plurality of mold



cavities in its surface and having a groove connected with each of said cavities for supporting one end of a handle for the candy with its other end projecting into one of the mold cavities to be embedded in the candy formed therein; and means in the bottom of each mold cavity cooperating with the handle receiving grooves of the molding die to support the other end of a candy handle, said means preventing lateral bending of the handle as the candy is pressed into the mold.



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The satisfaction of KNOWING that their wrapping machines will give EFFICIENT, UNINTERRUPTED SERVICE AT ALL TIMES is just one reason why candy manufacturers the world over prefer IDEAL Equipment. These machines, suitable for both large and small manufacturers, are fast, always de-

pendable and economical. The SENIOR MODEL wraps 160 pieces per minute; new HIGH SPEED SPECIAL MODEL wraps 325 to 425 pieces per minute.

Both machines are built for the most exacting requirements and carry our unqualified guarantee.

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A 24-inch National Equipment coater; a thousand-pound chocolate melting kettle with automatic heat control; an 80-foot Economy cooling tunnel and packing table. (This cooling tunnel of course has the cooling unit attached to it.) Address C-3434, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

FOR SALE: 1 Package Machinery Sucker Wrapper; 1 Each Package Machinery Model K and KD Kiss Machines, with motors; 2 Hildreth Pulling Machines, No. 6, double arm, 200-lb. capacity, motor driven, and 2 Hildreth Pulling Machines, display models, 10 to 25 lb. capacity; 3 American Candy Pullers, factory sizes, 100-lb. capacity. Address C-3437, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

FOR SALE: 1 Lot Penny, 5 & 10c Flat Solid Chocolate, also 2 face Solid Chocolate, all year around, Easter and Christmas Moulds, 1 Lot of Push Cards. For full information and bargain low prices, write Love Manufacturing Company, 131 Henley Road, Overbrook Hills in Merion, West Park Station, Philadelphia, Pennsylvania.

FOR SALE: Raffetto Brand No. 10
Cans, 2 Natural Pineapple for dipping, 1 Grenadine Pineapple for dipping, 1 Rum Pineapple for dipping, 1 Grenadine Dipping Grapes. Also 6M Cellophane bags—1¾" x 1 x 5½, 300
P.T. Squares. Mrs. Gotschall's Home Craft Candies, 608 North Sixth St., Vincennes, Indiana.

MACHINERY FOR SALE: Two 150 lb. Racine Chocolate Melting Kettles. Motors attached. Star De-Luxe Automatic Gas Nut Cooker. Both excellent condition. Barbara Fritchie Chocolate Shoppe, Box 644, Frederick, Md. FACTORIES WANTED

Want to Purchase CANDY FACTORY:

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2 W. 39th St.

Kansas City, Mo.

WANTED for cash on the spot a candy factory with not less than 1000 bag per year sugar quota. Equipment and good will not of much importance. Address C-3431, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

We are interested in purchasing a modern going candy factory located in the east or far west. Prefer one equipped for making fudge. Send complete details to C-3432, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

WANTED: Candy factory. Will purchase for cash, operate, and keep organization intact. Have sufficient capital and knowledge of business to operate company successfully. Will pay 'spot' cash with or without real estate. Please give full details. Address C-3435, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

WANTED: Candy Factory now in operation west of the Mississippi River. Give size, also location, and 1941 chocolate, sugar and corn syrup tonnage. Responsible parties. Address 3433, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

MISCELLANEOUS

WANTED: Glucose, corn syrup, corn sugar, cocoa, corn chips, cocoa chips. Best prices paid. J. B. Robinson, 1020 Woodland Ave., Cleveland, Ohio. MACHINERY WANTED

MACHINERY WANTED: Copper Kettles, Vacuum Pans and Coating Pans; Mixers, Tanks, Dryers, Tablet Machines, etc. Send us a list of your idle equipment, Loeb Equipment Supply Co., 907 N. Marshfield Ave., Chicago.

WANTED: Steel or wood moguls, automatic ball machines, and starch dryers. Interested in modern equipment in good operating condition. Give full details, price, and where equipment may be inspected. Will pay cash and remove immediately. Address C-3436, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

MACHINERY WANTED: Second hand cream beater. T. J. Boosalis, Candy Shop, Decorah, Iowa.

MACHINERY WANTED: Electric Chocolate Melter for approx. 40 lbs. Address C-3438, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

WANTED: Two, 2,000 pound steam jacket chocolate melters. Two, 1,000 pound, steam jacket, chocolate melters. Must be in first-class condition. State make and price and from where same will be shipped. Address B-2433, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

WANTED—One or more secondhand Ideal Batch Feeds, ¾" size preferred, but will consider any other size. Give Serial No. of machine and your cost in first letter. Address B-2431, c/o The Manufacturing Confectioner, 400 West Madison Street, Chicago, Ill.

MACHINERY WANTED: URGENTLY WANTED: Copper Coating Pans and Vacuum Pans; Tablet Machines; Dryers and Mixers; Jacketed Copper and Aluminum Kettles. Describe fully and quote prices. Address A-1433, c/o The Manufacturing Confectioner, 400 West Madison Street, Chicago, Ill.

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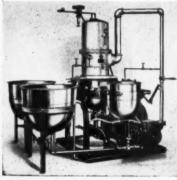
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National Equipment Continuous Cooker with pre-melting Kettles.

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You can perform a war time service by putting every idle machine back to work! We have jobs for idle equipment in plants doing war work. Wire col-lect what you can offer.



Moulding Department

Impried Super Dreadnaught Plastic Center Machine, Motor driven, with two extra dles.

735—Trays for above machine, 27" x 41" also, 29 trucks for trays.

I—National Equipment Fully Automatic Wood Mogul, type AD, with extra Pump Bars.

I—National Equipment type A Wood Mogul, with extra Pump Bars.

3000—Standard Size Starch Trays filled with clean white starch.

white starch.

I—National Equipment Junior Depositor with 12
Outlet Pump Bars.

I—Gyrator Sifter.

35—Starch Trucks.

475—Vood Work Trays.

10,000—Stock Boxes, 181/4" x 141/2" x 51/4".

Hard Candy Department

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Chocolate Coating

Chocolate Coating

I-National Equipment special 48" Bottomer or Half Coating Machine, motor driven, with 48" Feeding Table and 48" Cooling Tunnel 27 ft. long (used to half coat centers made on the Dreadnaught Center Machine).

I-National Equipment 24" Enrober, equipped with automatic feeder, bottomer, 45 ft. Cooling Tunnel, and 10 ft. Packing Table.

3-National Equipment Enrobers, equipped with automatic feeders, 40 ft. Bentz Cooling Tunnels and 15 ft. Bentz Packing Tables.

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Melters. 2—Racine 300 lb. cap. Chocolate Melters.

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4—Chocolate Brushing Machines, motor driven.
II—3 and 4 Pot Electric Dipping Tables.
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240—Wood Plaque Trays 16" x 10".
2100—Wood Plaque Trays 14"x 16½". x 16½".

Steam Jacketed Kettles

9—Young Steam Jacketed Cooking Kettles, 10 to 150 gal. cap. 1—Burkhardt Steam Jacketed Cooking Kettle, 28" 2842" 4 Million

-Burkhardt Steam va. 284% tilling type.
-Steam Jacketed Cooking Kettle, 25" x 20"
tilling type.
-Single Action, Steam Jacketed Cooking Kettle
with overhead drive.
-Open Fire Kettles, various sizes.

-National Equipment Company Syrup Cooler and Cream Beater, 400 lb. cap. -Werner Syrup Cooler and Cream Beater, 480 lb.

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Caramel Kettle, -Savage 150-lb, cap., Marshmallow Beater. -Read Mixer, with grinding attachment, motor

I-Barbour Stockwell Dough Type Mixer.
I-Read Mixonette, motor driven.

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2-National Equipment Crystal Syrup Cookers and Coolers.
2—Greer Crystallizing Racks, 30 Pan cap., 183/2"
x 10" x 6'4" size of racks.

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MACHINERY WANTED

MACHINERY WANTED: WANTED: FORGROVE OR ROSE WRAPPING MACHINE FOR WRAPPING HARD CANDY. Address A-1431, c/o The Manufacturing Confectioner, 400 West Madison Street, Chicago, Ill.

EQUIPMENT WANTED—We are in the market for all types of Candy Cutting and Wrapping machines both wax and cellophane. Model K and KD's and toffee, etc. Give us details and best cash price. Address J-10422, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

IDEAL CARAMEL WRAPPING MACHINE in A1 condition. Give full information. Address J-10424, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

MACHINERY WANTED: Caramel Cutters, Sizers, and Wrapping Machines. Address J-10425, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Illinois.

WANTED: Two 22-B Wrapping Machines. Write or wire immediately. Address I-9421, c/o The Manufacturing Confectioner, 400 W. Madison Street, Chicago, Illinois.

HELP WANTED

CANDY MAKERS: Women, Would like to contact women throughout the country that have had experience in small homemade retail and wholesale candy shops, where they have had occasion to at least help in the making of a general line of caramels, nougats, fudges, chocolate centers, etc., from the cooking to the finished product. Must have general all round experience. Steady work for those that can qualify. Give full details regarding experience, salary expected, age, etc., in first letter. Address Price Candy Company, General Office, Price Building, 2 West 39th Street, Kansas City, Missouri.

HELP WANTED

WANTED: All around experienced candy maker to take charge of small wholesale candy manufacturing plant. Barentsen Candy Co., Benton Harbor, Michigan.

HELP WANTED—SUPERIN-TENDENT—Thoroughly familiar with production of a five cent chocolate coated bar. Plant in the East employing approximately 100 persons, now specializing in a few items. Position immediately available. Excellent opportunity for right person. Write stating detailed experience, qualifications, references and salary desired. Address B-2434, c/o The Manufacturing Confectioner, 400 West Madison Street, Chicago, Illinois.

HELP WANTED: We offer an excellent opportunity for steady employment to a high class chocolate foreman well acquainted with center making and enrober work. Write full details to A-1432, c/o The Manufacturing Confectioner, 400 West Madison Street, Chicago, Ill.

HELP WANTED: Retail Hard Candy Maker. Preferably a man with general retail experience. Open fire work. Adequate salary with Bonus. Permanent position. Age no barrier. Write giving full experience and references, and salary expected. Apply. Virginia Dare Confections, Inc., Baltimore, Md.

HELP WANTED: CANDY COATER for coating tablets and pills. Must have some experience either in pill and tablet or hard candy coating. For permanent position in pharmaceutical house in Philadelphia. Give full particulars as to age, experience and draft classification. Write Sharp & Dohme, Inc., P. O. Box 7259, Philadelphia, Pa.

ASSISTANT CANDY MAKER wanted experienced on home-made types; good opportunity with progressive company in California. Write full details to I-9424, c/o The Manufacturing Confectioner, 400 W. Madison Street, Chicago, Illinois.

HELP WANTED

WANTED: HARD CANDY MEN THOROUGHLY EXPERIENCED ONLY FOR HIGH CLASS CANDY PLANT IN NEW YORK CITY. (1) COOKER WITH EXPERIENCE ON CONTINUOUS COOKER. (2) SPINNER AND ALLAROUND MAN. WE OFFER GOOD PAY AND STEADY EMPLOYMENT. WRITE FULL DETAILS. Address C-3439 c/0 THE MANUFACTURING CONFECTIONER, 400 West Madison Street, Chicago, Illinois.

MOGUL MAN — Working foreman capable of making all repairs on steel mogul. Operate an efficient department. Steady position. Transportation paid. Address K-11421, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Illinois.

Attention! Excellent Opportunity!
WANTED: All-around maintenance
man or first class stationary engineer. Excellent opportunity for advancement. Permanent position with
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Paul, Minnesota. Selected man must
give A-1 references and stand investigation. Candy plant experience desirable. Write, giving age, experience,
etc. Address K-11422, c/o The
Manufacturing Confectioner, 400
W. Madison St., Chicago, Illinois.

HARD CANDY MAKER AND SPINNER—about 35 to 40 years old—preferably a man who has also had general experience. Open fire cooking. Salary will be adequate. Midwest location. Write giving full experience and references. Address I-9426, c/o The Manufacturing Confectioner, 400 W. Madison Street, Chicago, Illinois.

CANDY MAKER WANTED: Competent, experienced all round candy maker familiar with cream, fudge and hard candies, reasonable hours. Good pay. J. C. Claeys Candy Co., South Bend, Indiana.

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THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE



POSITIONS WANTED

CONFECTIONERS-Here is a man, thoroughly competent, in the operation of all types of Panned Goods. One that can produce on a large scale. Either for chain store distribution or for the Jobbing trade. Fully experienced and capable to manufacture all of your Flavors. Has had a real training in this line of work and with the use of scrap from all of your plant. Can assist you with his long experience, in problems from all of your departments. Would be available October 1st. Interested in negotiating a connection with an organization that requires real output and quality goods. Address I-9429, THE MANUFACTUR-ING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITIONS WANTED—Factory Manager or Superintendent, over thirty years manufacturing and sales experience. General line candy, capable of handling help efficiently, getting maximum output, with low cost production. Can give A1 references from leading manufacturers. Address L-12422, c/o The Manufacturing Confectioner, 400 W. Madison St.,

POSITIONS WANTED

SUGARLESS MANUFACTURER. Superintendent or Ass't. Supt for big or small plant. Capable to produce highest quality of Confectionery of United States. With 20 years experience of general line manufacture of candy. Specialized for Fondant, Center cream. Fondant, Bon Bons Cream. Fondant, Dipping cream. Fondant, Nulomoline. Fondant, Mazzetta. Fondant, hand rolls cream. Crystalize Cream wafers, and Asst. Bon Bons cream in full. Cream center. Hard center. Casting caramels. Gum and jellies. Fudge. Marshmallow. Hand rolls center. And all casting candy, includes 5c bar, 1c line. Have own formulas, and able to bring new idea to producing quality at minimum cost, with steel mogul, and modern equipment. I have also experience in speeding up the production and can control the helper. Living in Illinois. Best reference. Position must be steady. Address J-10423 c/o The MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill. .

POSITIONS WANTED — Candy maker wants position in first-class retail store. Can make finest line of retail candies, chocolates, bonbons, hard candies, jellies, cream goods, nougat, etc. Can operate Friend Hand Roll machine. Address L-12421, c/o The Manufacturing Confectioner, 400 W. Madison Street, Chicago, Ill.

SALE REPRESENTATION

SALESMAN covering Pennsylvania excluding Philadelphia will consider taking on a short line or several good specialties on straight commission basis. Seventeen years experience and large personal following with the trade. Address K11415 c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

BROKER WITH associate, covering metropolitan district of New York calling on the confectionery jobbers, food distributors, chains, department stores and exporters, is seeking a general line of confectioner or specialties. Reliable service Guaranteed. Address H8419 c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Illinois.

WANTED: Representatives for new line of round paper boxes replacing tins. Made-to-order and stock lines. Liberal commission. Write immediately. Address F-6422, c/o The Manufacturing Confectioner, 400 W. Madison Street, Chicago, Ill.

EXPERIENCED Candy broker covering Virginia, North and South Carolina desires Penny and 5c number novelties, contacting the wholesale candy syndicate and department store trade regularly. Address C-3421, c/o The Manufacturing Confectioner, 400 W. Madison St., Chicago, Ill.

OF THE M.C.? IT'S ALL RIGHT FOR THAT SUPERINTENDENT TO BORROW IT, BUT BY GOSH HE MIGHT AT LEAST RETURN IT WHEN HE'S ALL THRU!

THE MANUFACTURING

400 W. MADISON ST.

THIS HAPPEN TO

Don't cuss! You can avoid this by having your "M.C." sent to your home. Then you will always know where it is when you need and want it.

PRICES

1 year\$3.00 2 years\$5.00 (Enclose check with order)

CONFECTIONER

CHICAGO, ILLINOIS

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MANUFACTURING CONFECTIONER
400 W. Madison St., Chicago
YES, here's my check. Send the "M.C." to my home.
I'll fix those guys!
Name

Company Street State

Chicago, Ill.



★ ★ TIME-HONORED PRODUCTS ★ ★ ★

CORN SYRUP UNMIXED CONFECTIONERS' STARCHES DEXTROSE (REFINED CORN SUGAR)

QUALITY UNIFORMITY DEPENDABILITY

CLINTON COMPANY

CLINTON, IOWA



FOR VICTORY
BUY U. S. WAR SAVINGS BONDS



